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```
TatA(Eco)    M-GGISIWQLLIIAVIVVLLFGTKKLG------------------------------ 26
TatE(Eco)    M-GEISITKLLVVAALVVLLFGTKKLR------------------------------ 26
TatAy(Bsu)   M--PIGPGSLAVIAIVALIIFGPKKLP------------------------------ 25
TatAd(Bsu)   MFSNIGIPGLILIFVIAIIIFGPSKLP------------------------------ 27
TatAc(Bsu)   M--ELSFTKILVILFVGFLVFGPDKLP------------------------------ 25
TatB (Eco)   MF-DIGFSELLLVFIIGLVVLGPQRLPVAVKTVAGWIRALRSLATTVQNELTQELKLQ 49
             *   ..   . ..  .  ...*. .*

TatA(Eco)    ---------------SIGSDLGASIKGFKKAMSDDE----PKQDKTSQDADFTAKTI  64
TatE(Eco)    ---------------TLGGDLGAAIKGFKKAMNDDD----A-AAKKGADVDLQAEKL  63
TatAy(Bsu)   ---------------ELGKAAGDTLREFKNATKGLT----SDEEEKKKEDQ------  57
TatAd(Bsu)   ---------------EIGRAAKRTLLEFKSATKSLV----SGDEKEEKSAELTAVK-  64
TatAc(Bsu)   ---------------ALGRAAGKALSEFKQATSGLT----QDIRKNDSEN-----K-  57
TatB (Eco)   EFQDSLKKVEKASLTNLTPELKASMDELRQAAESMKRSYVANDPEKASDEAHTIHNP 114
                          ... .   .. ... * ..          ..   .

TatA(Eco)    ADKQADTNQE-------------------------------QAKTEDAKRHDKEQV  89
TatE(Eco)    SHKE-------------------------------------------------------  67
TatAy(Bsu)   -------------------------------------------------------------  57
TatAd(Bsu)   ----------------------------------------------------QDKNAG  70
TatAc(Bsu)   ---------------------------------------------------EDKQM-  62
TatB (Eco)   VVKDNEAAHEGVTPAAAQTQASSPEQKPETTPEPVVKPAADAEPKTAAPSPSSSDKP 171
```

FIG._1A

```
TatC (Eco)   MSVEDTQ--PLITHLIELRKRLLNCIIAVIVIFLCLVYFANDIYH-LVSAPLIK   51
TatCy (Bsu)  MTRMKVNQMSLLEHIAELRKRLLIVALAFVVFFIAGFFLAKPIIVYLQETDEAK   50
TatCd (Bsu)  MDKKETH---LIGHLEELRRRIIVTLAAFFLFLITAFLFVQDIYDWLIRDLDGK   51
             *.  ...   *..*. ***.*..    *  ....    ... *   *  .   *

TatC (Eco)   QLPQGSTMIATDVASPFFTPIKLTFMVSLILSAPVILYQVWAFIAPALYKHERR  105
TatCy (Bsu)  QL----TLNAFNLTDPLYVFMQFAFIIGIVLTSPVILYQLWAFVSPGLYEKERK  104
TatCd (Bsu)  -------LAVLGPSEILWVYMMLSGICAIAASIPVAAYQLWRFVAPALTKTERK   98
                   . . . .. ... . .. . ..  . **  **.* *..*.* . **.

TatC (Eco)   LVVPLLV---SSSLLFYIGMAFAYFVVFPLAFGFLANTAPE-GVQVSTDIASYL  155
TatCy (Bsu)  VTLSYI---PVSILLFLAGLSFSYYILFPFVVDFMKRISQDLNVNQVIGINEYF  155
TatCd (Bsu)  VTIMYIMYIPGLFALFLAGISFGYFVLFPIVLSFLTHLSSG-HFETMFTADRYF  151
             ...  .        **  *..*.*...**.. .*. . . . .   . .   *.

TatC (Eco)   SFVMALFMAFGVSFEVPVAIVLLCWMGITSPEDLRKKRPYVLVGAFVVGMLLTP  209
TatCy (Bsu)  HFLLQLTIPFGLLFQMPVILMFLTRLGIVTPMFLAKIRKYAYFTLLVIAALITP  209
TatCd (Bsu)  RFMVNLSLPFGFLFEMPLVVMFLTRLGILNPYRLAKARKLSYFLLIVVSILITP  205
              *...* ..**  *..*. ...* ..** .* * * *       .*..  *.**

TatC (Eco)   PDVFSQTLLAIPMYCLFEIGVFFSRF-YVGKGRNREEENDAEAESEKTEE      258
TatCy(Bsu)   PELLSHMMVTVPLLILYEISILISKAAYRKAQKSSAADRDVSSG-----Q      254
TatCd(Bsu)   PDFISDFLVMIPLLVLFEVSVTLSAFVYKKRMRE-----ETAAA-----A      245
             *. .*. .. .*.  *.*... .*   *    ..     .....     .
```

FIG._1B

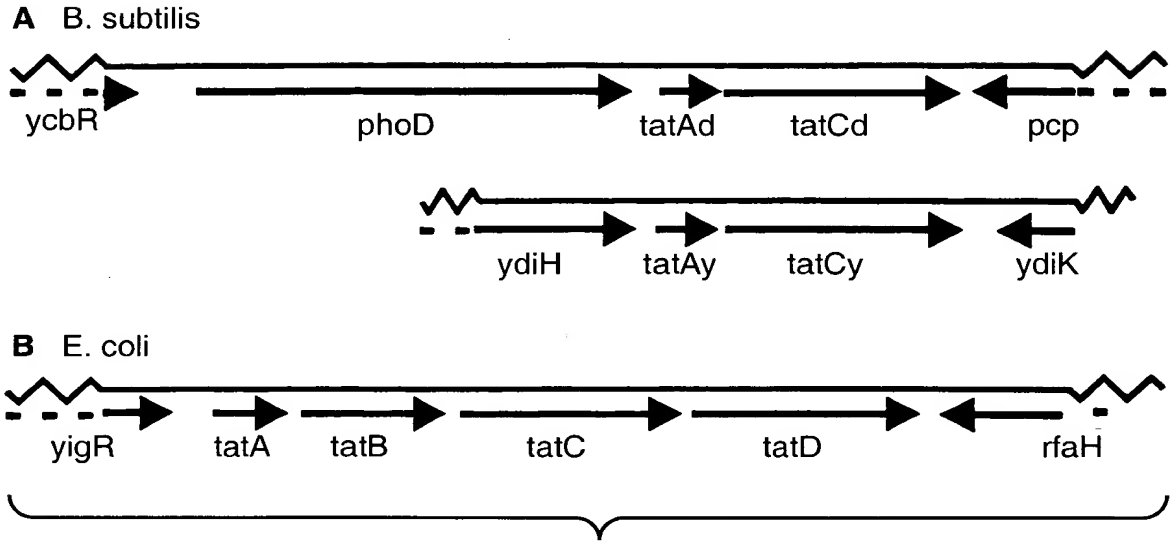


FIG._2

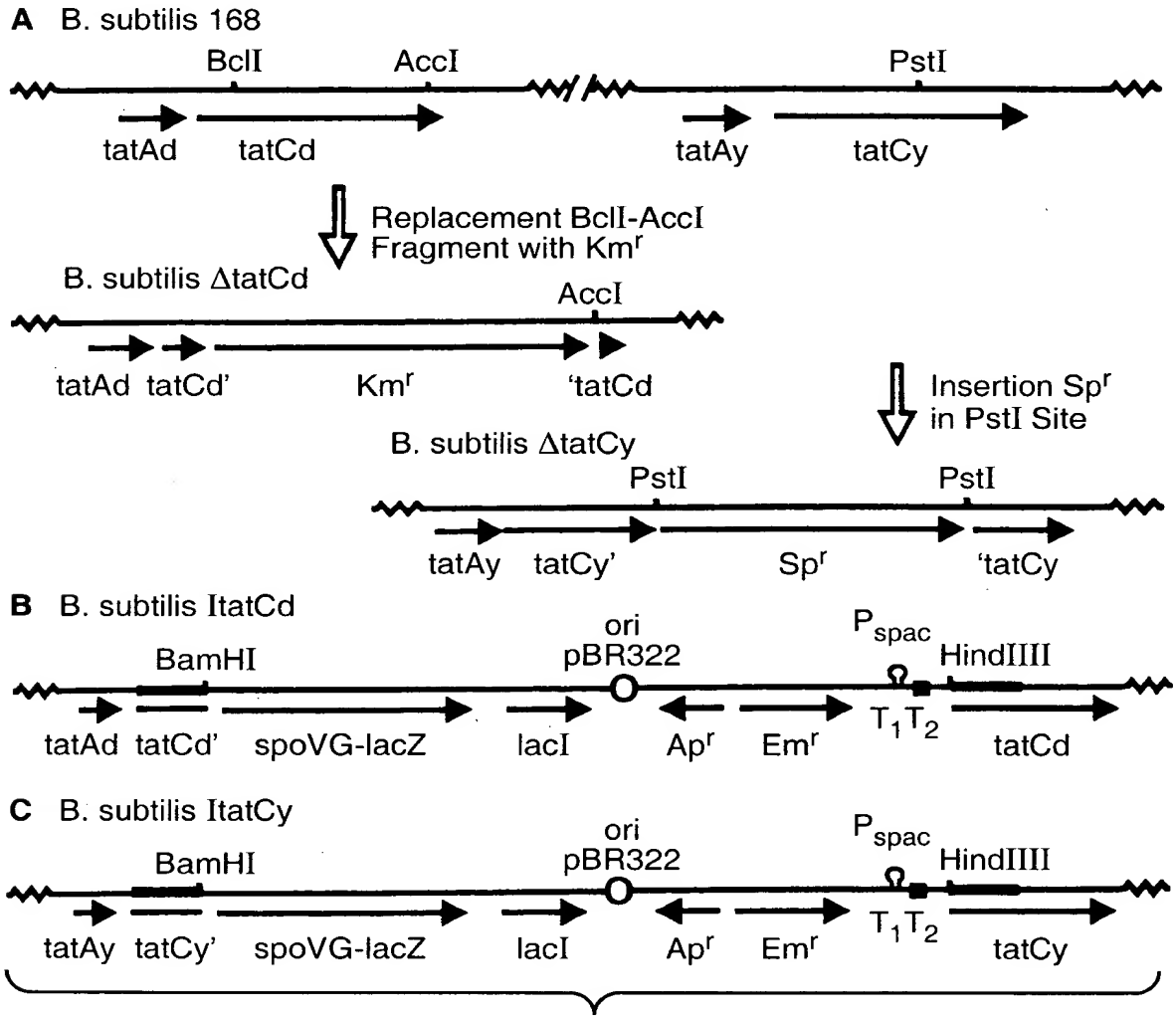


FIG._3

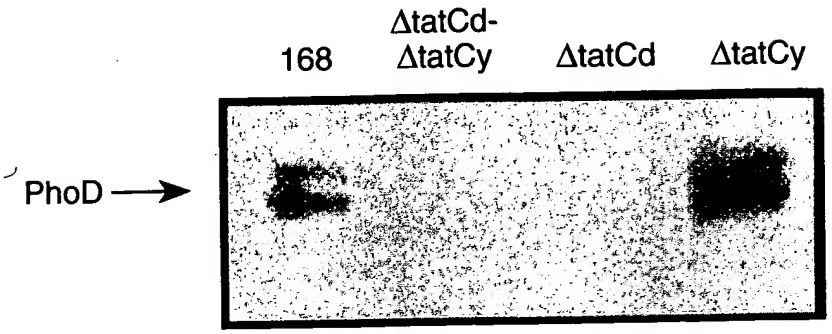


FIG._4A

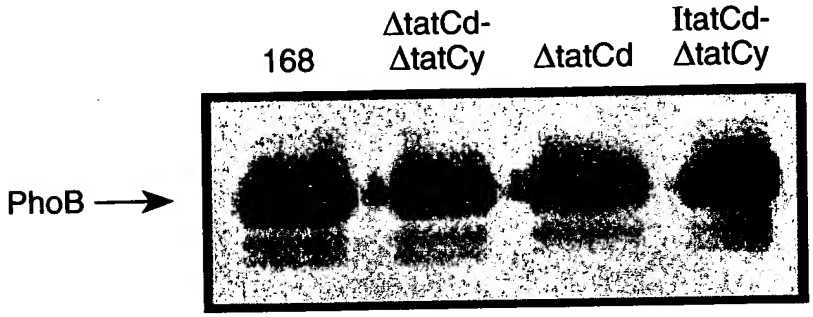
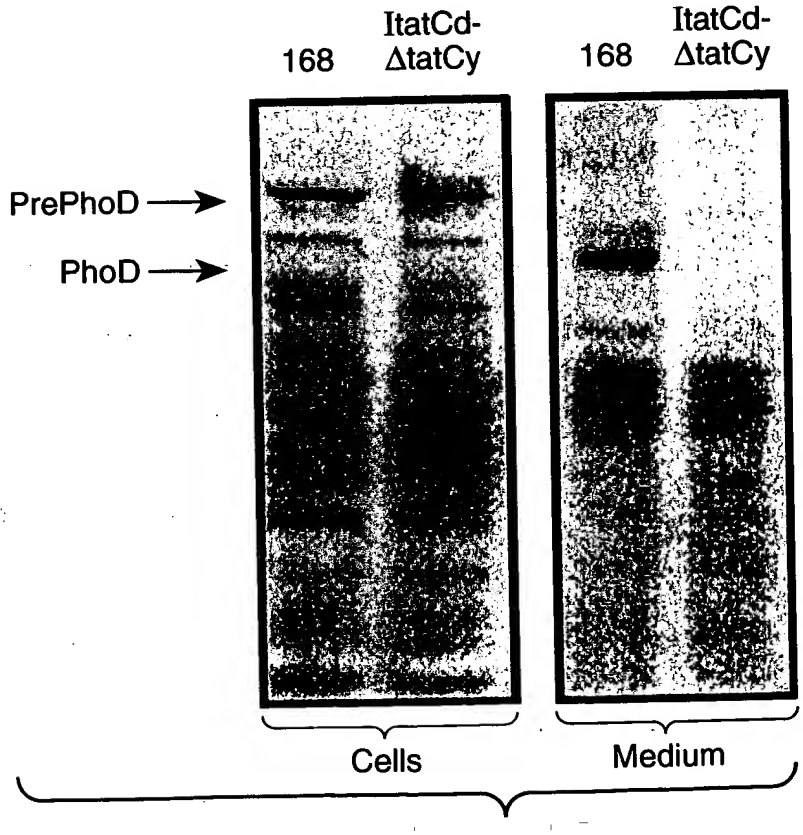


FIG._4B



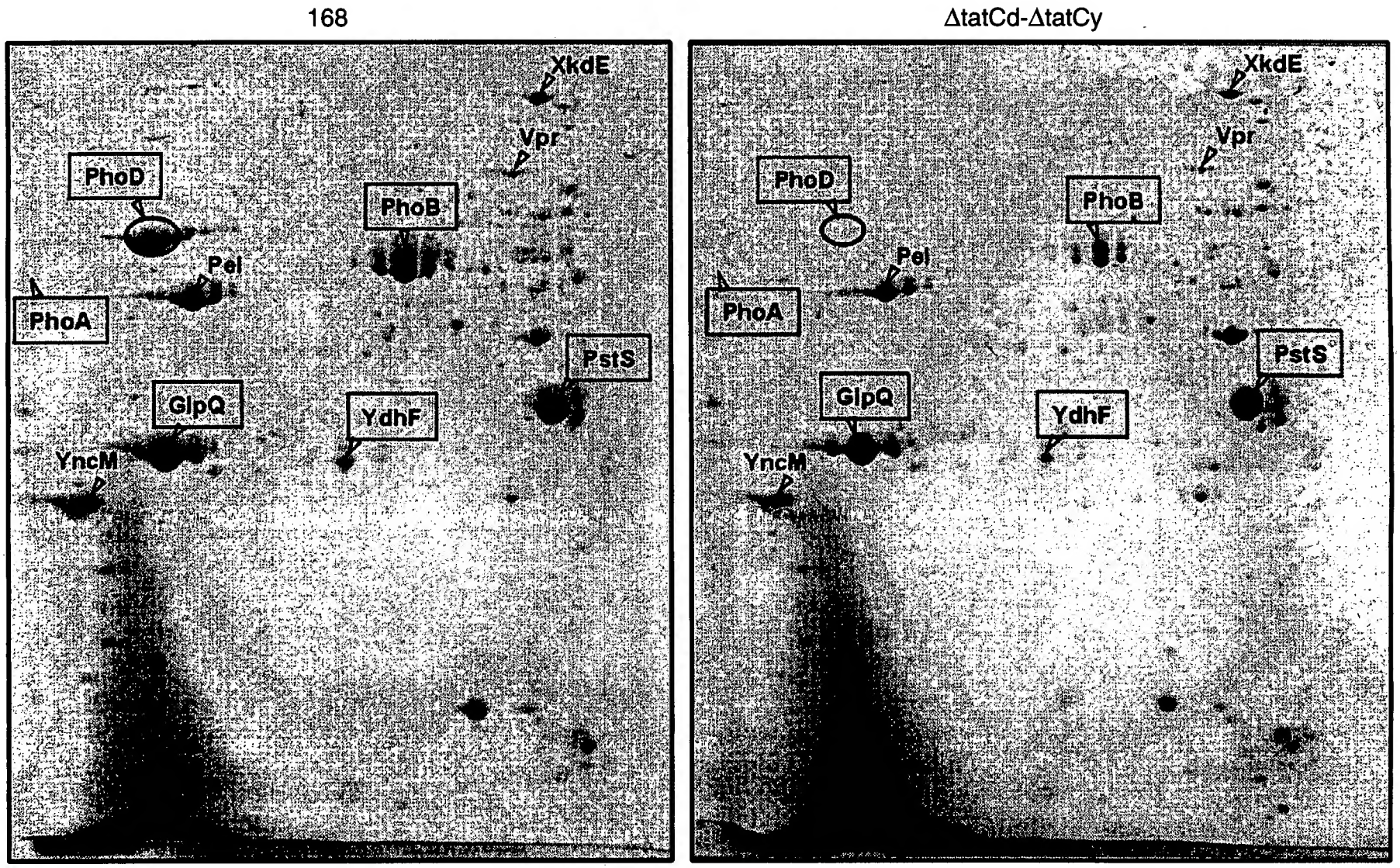

168
ΔtatCd-ΔtatCy
XkdE
Vpr
PhoD
PhoB
Pel
PhoA
PstS
GlpQ
YdhF
YncM

FIG._5

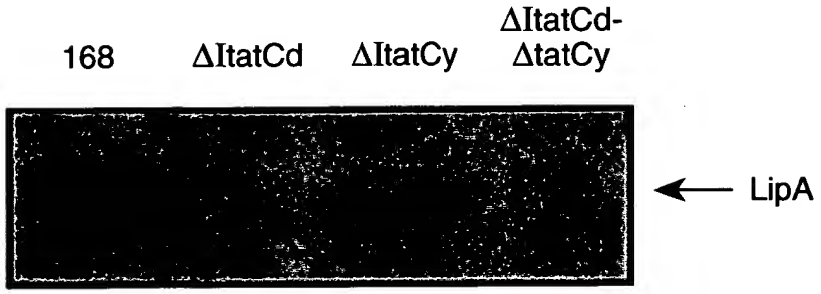


FIG._6

Protein		N	h	RR-Motif	H	h	C
AlbB		1	0.1	RRILL	27	2.0	AIA
AmyX	TM	9	-0.8	RRSFE	15	1.1	-
AppB	TM	8	0.5	RRTLM	19	2.3	-
LipA		7	-1.1	RRIIA	19	1.2	AKA
OppB	TM	8	-0.6	RRLVY	24	2.0	-
PbpX		2	-2.2	RRRKL	14	2.9	WNA
PhoD		3	-1.3	RRKFI	17	0.9	VGA
QcrA	TM	1	-1.1	RRQFL	19	1.3	-
TlpA	TM	1	-0.8	RRLII	21	2.4	-
WapA	W	1	-3.0	RRNFK	18	2.3	VLA
WprA		8	-1.7	RRKFS	20	1.9	AAA
YceA	TM	1	-0.4	RRAFL	21	2.2	-
YesM	TM	1	-1.5	RRMKI	20	2.4	QYA
YesW		1	-1.3	RRSCL	19	2.0	VKA
YfkN	TM	1	-1.2	RRTHV	17	1.7	IHA
YkpC		8	-1.0	RRVAI	17	2.3	SLA
YkuE		1	-1.3	RRQFL	17	1.0	GYA
YmaC		7	0.0	RRFLL	15	2.4	YSL
YubF	TM	9	-2.7	RRNTV	23	2.0	-
YuiC		8	0.2	RRLLM	20	1.9	IEA
YvhJ	TM	2	-1.7	RRKIL	18	2.5	-
YwbN		1	-1.8	RRDIL	23	1.4	QTA

FIG._7

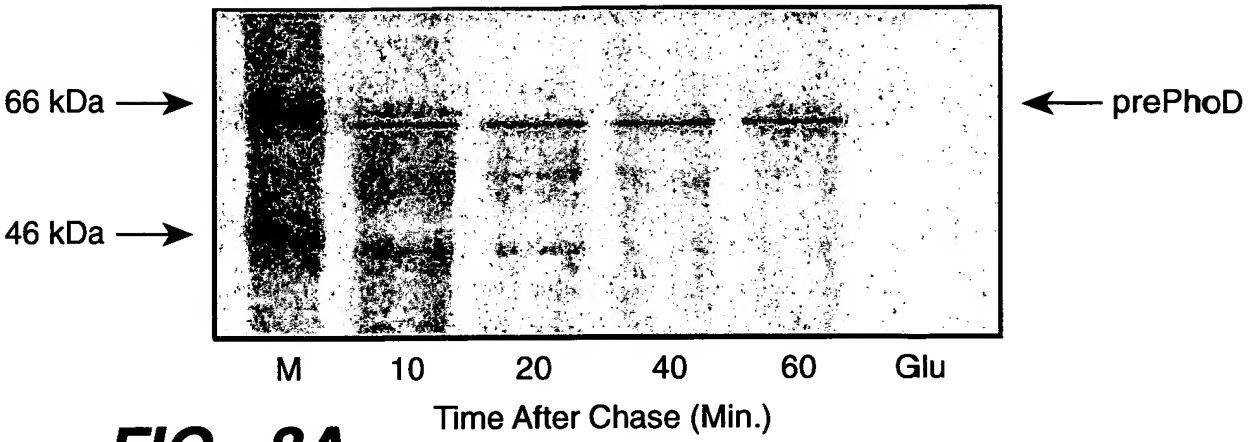


FIG._8A

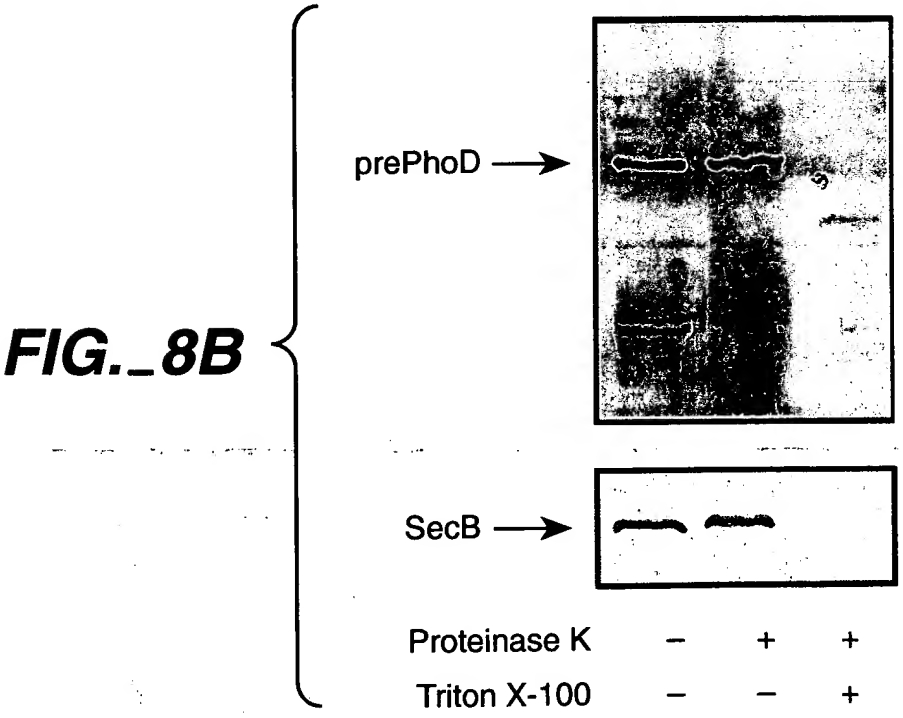


FIG._8B

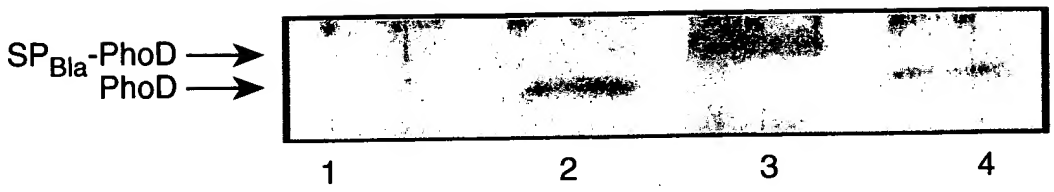


FIG._9A

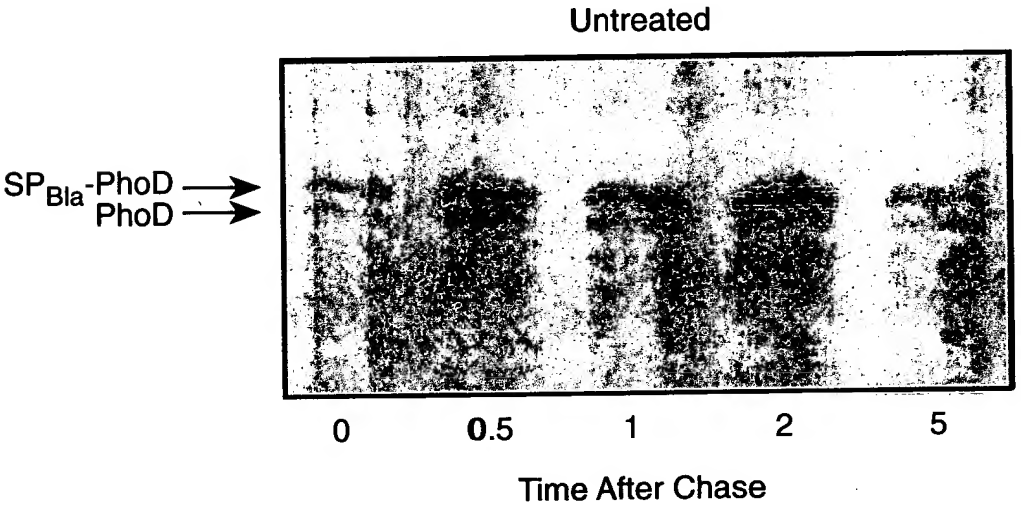


FIG._9B

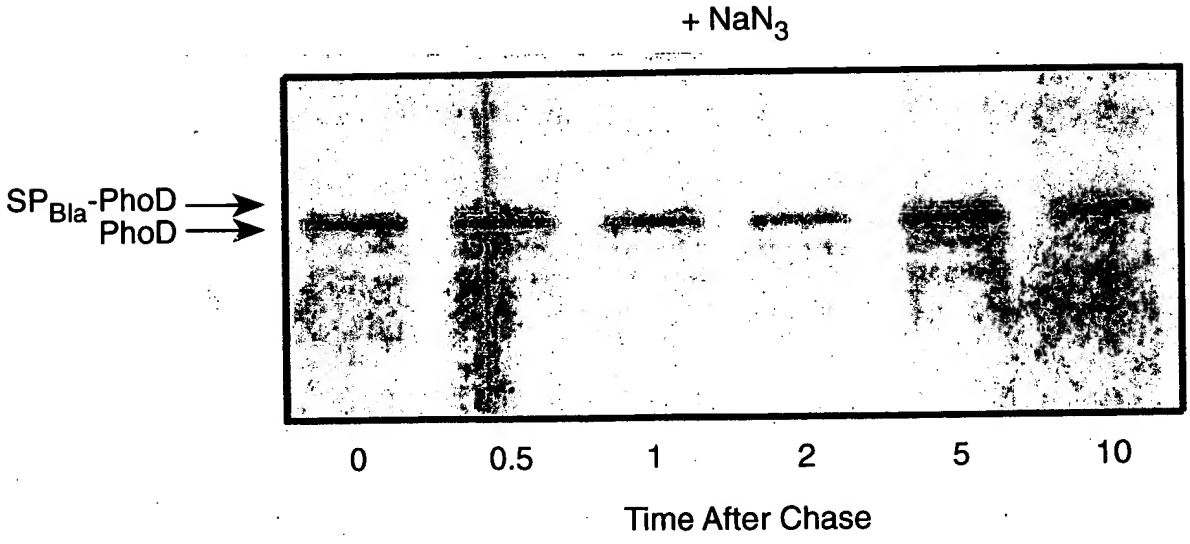


FIG._9C

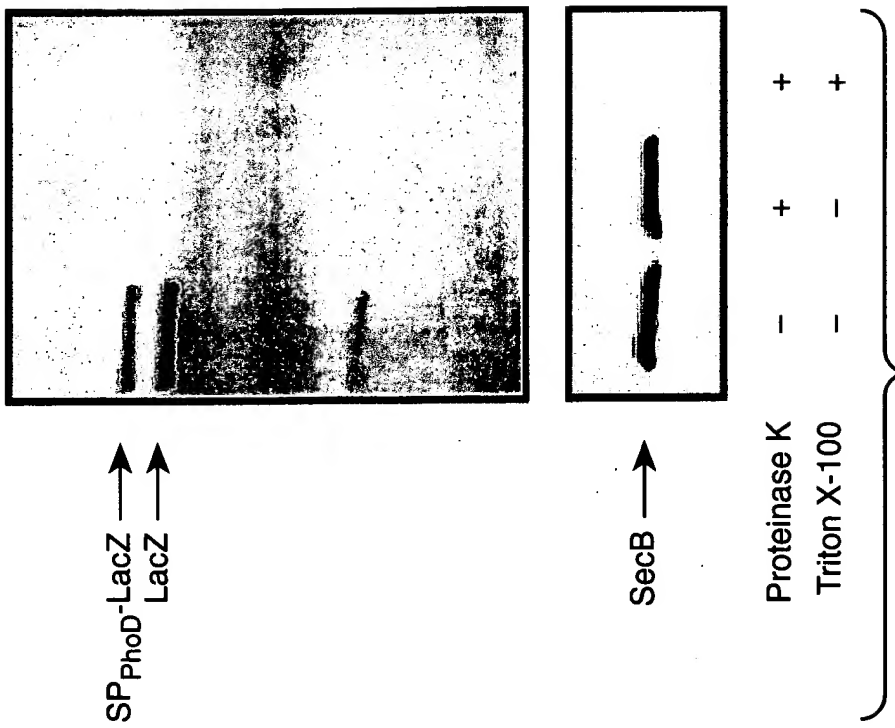


FIG._10B

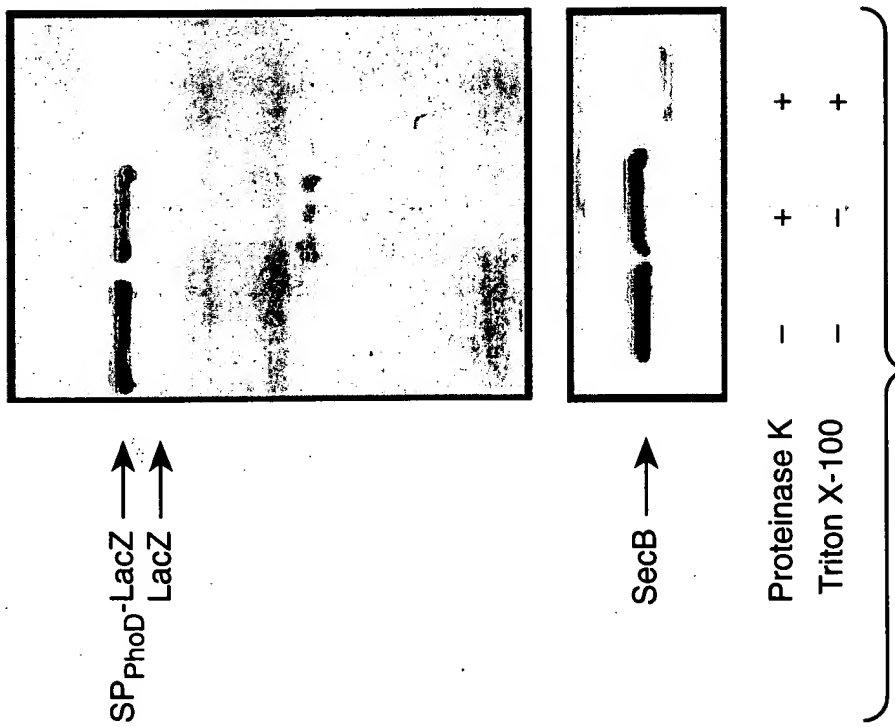


FIG._10A

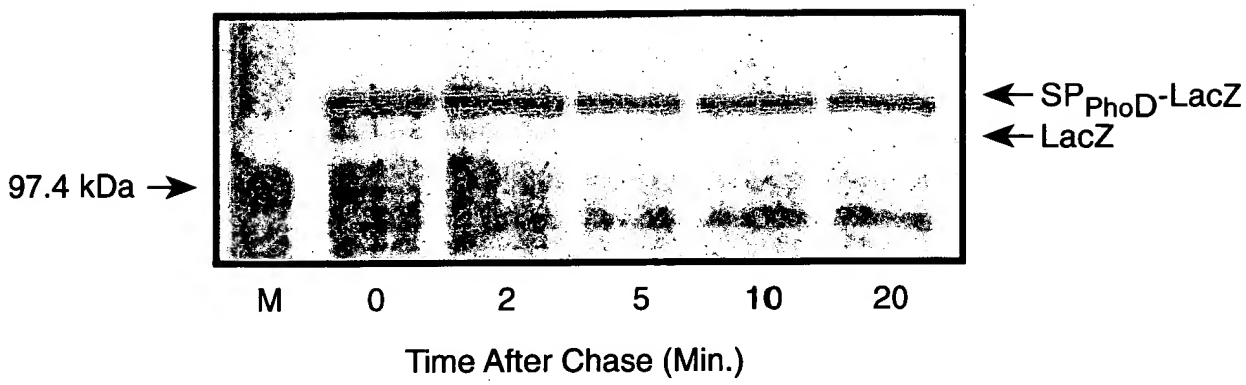


FIG._11A

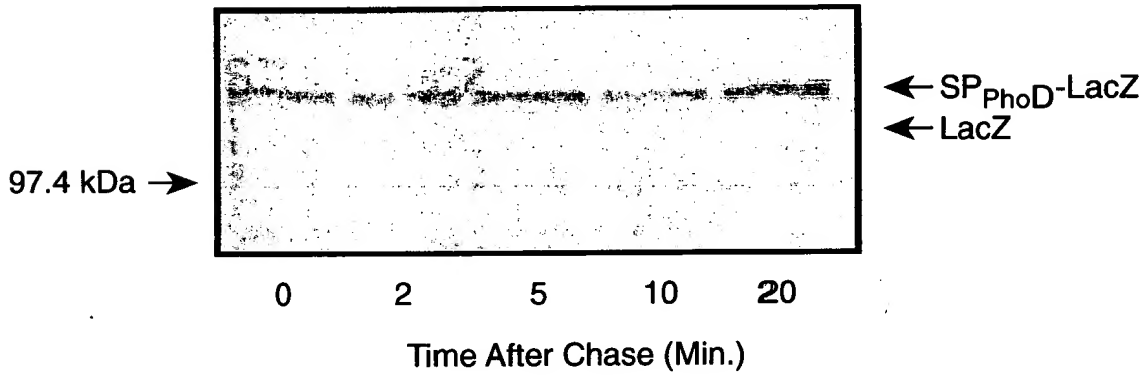


FIG._11B

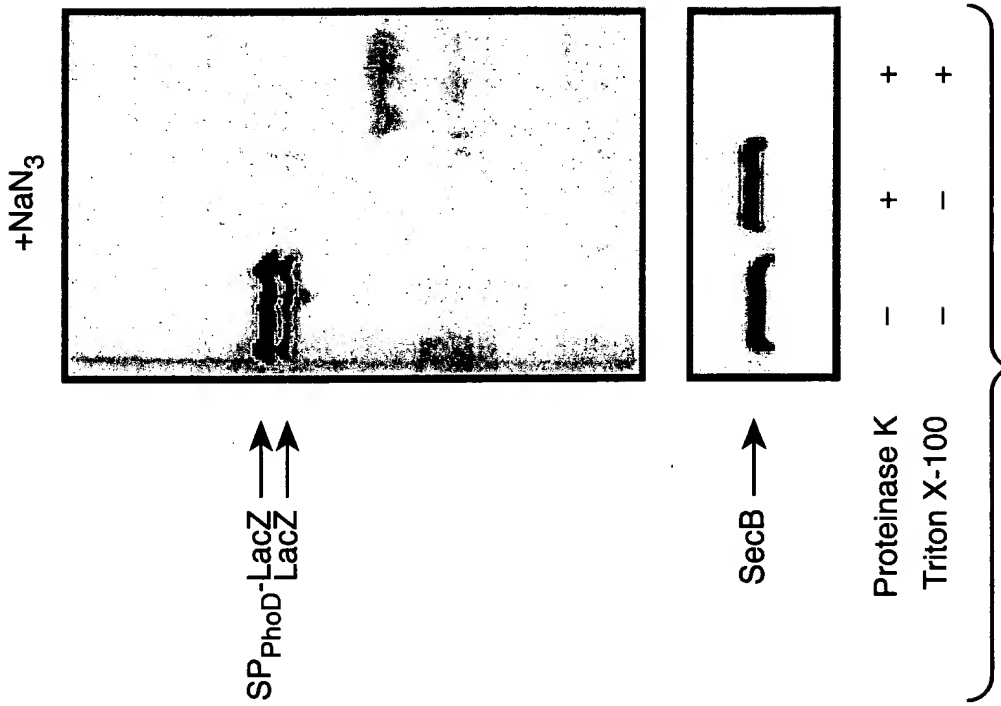


FIG._12B

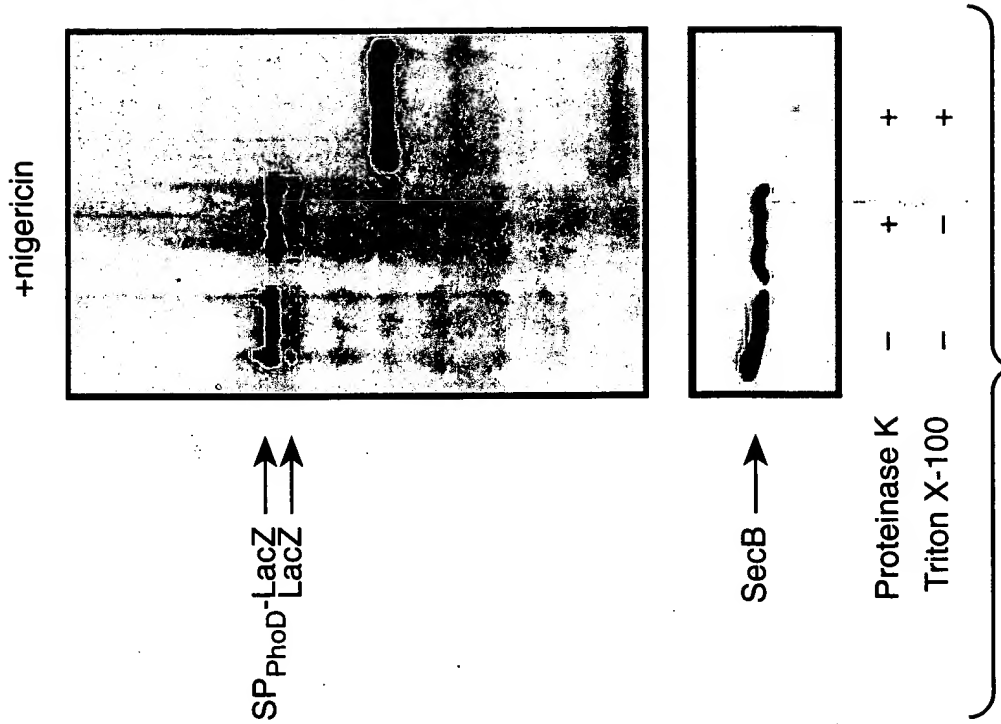


FIG._12A

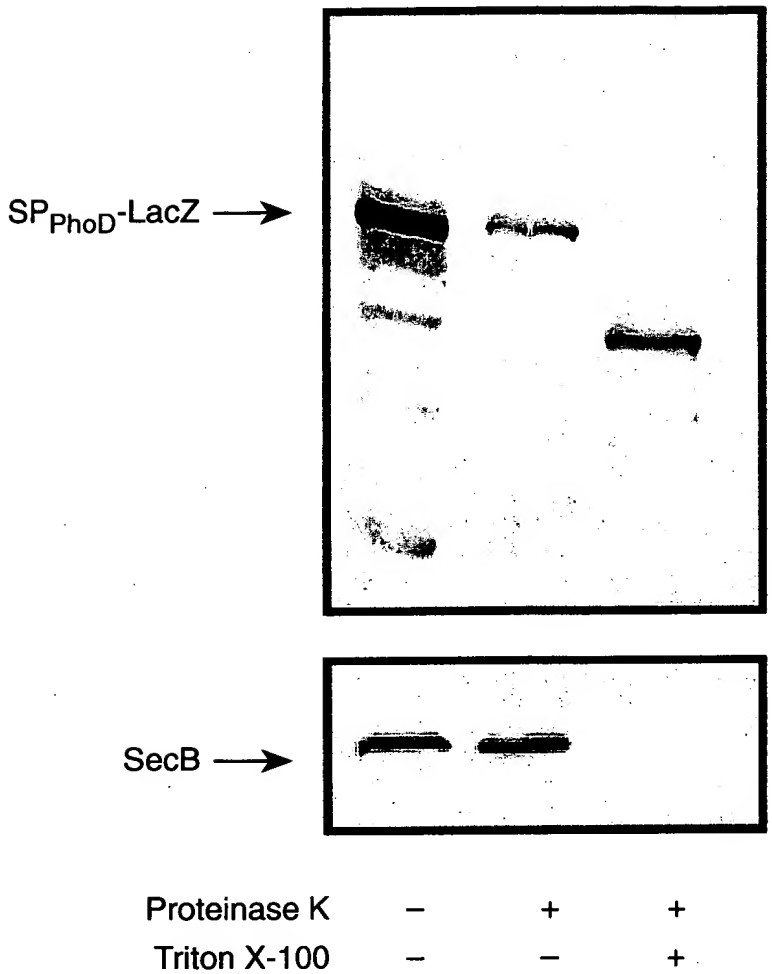


FIG._13

Homologs in B. alcalophilus

TatA

MGGLSVGSVVLIALVALLIFGPKKLPELGKAAGSTLREFKNATK
GLADDDDDTKSTNVQKEKA

TatC

MTMMTPNQQTSKKKKRKGRKGRVPMQDMSIMDHAEELRRRIF
VVLAFFIVALIGGFFLAVPVITFLQNSPQAADMPFNAFRLTDPLRV
YMNFAVITALVLIIPVILYQLWAFVSPGLKENEQKATLAYIPIAFL
LFLAGIAFSYFILLPFVISFMGQMADRLEINEMYGINEYFSFLFQL
TIPFGLLFQLPVVVMFLTRLGVVTPTFLRKIRKYAYFALLVIAGII
TPPELTSHLFVTVPMLILYEISITISAITYRKYHGTTDHNGQESAK

FIG._14